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ABSTRACT

Research on trait descriptions of interpersonal behavior tends to converge on a two-dimensional representation in which descriptive variables are arrayed in a circular fashion around the major axes of affiliation and dominance. Wiggins' self-report adjective checklist (1979) reflects this theoretical ordering. To explore the utility of Wiggins' instrument and model, 72 adults and 97 college students completed the Wiggins Interpersonal Adjective Scale. The order of the adjectives was randomized and subjects were asked to rate how descriptive each adjective was to them. For each sample, maximum likelihood estimates of the population correlation coefficient were computed under the assumptions of circumplexity and these hypothetical latent variables were used to interpret the data. Results from the adult sample indicated that Wiggins' circulant taxonomy of interpersonal behaviors can be extended to adult populations, although deviations from bipolarity were noted. The student sample results, however, indicate that response style factors can play a very strong role with this checklist, even when a general style factor is eliminated. Results suggest that evaluations of circumplex models should consider simple structure models as the most likely alternative. (JAC)

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Deviation from Wiggins' Circumplex Model in Student and Adult Populations

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Abstract

Wiggins' Interpersonal Adjective Scales (1979) were administered to 72 adults and 97 college students and their fit to a circumplex model was examined. The data for the adult sample gave an acceptable fit to circulant structure, although deviations from bipolarity were noted. Data for the student sample gave a poor fit to circulant structure, even when ipsatized to eliminate strong response style variance. Simple-structure three-component solutions provided alternative models for each of the samples.

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Deviation from Wiggins' Circumplex Model in

Student and Adult Populations

Research on trait descriptions of interpersonal behavior has tended to converge on a two-dimensional representation in which descriptive variables are arrayed in a circular fashion about the major axes of affiliation and dominance (Wiggins, 1982). Wiggins (1979) has constructed a self-report adjective checklist to reflect this theoretical ordering and has also discussed procedures for evaluating the fit of empirical data to the theoretical circumplex model (Wiggins, Steiger, & Gaelick, 1981). The current study was intended to explore the utility of Wiggins' instrument and model in both a college-student and an adult sample.

Method

Subjects

Seventy-two adults, drawn primarily from a set of business people, and 97 college students completed the materials. The median age of the adults was 36 and of the students was 19. The adult sample was composed of 51 males and 21 females; the student sample had 47 males and 50 females.

Instrument

Wiggins' Interpersonal Adjective Scales consist of 128 trait adjectives scored into eight scales: ambitious-dominant; gregarious-extraverted; warm-agreeable; unassuming-ingenious; lazy-submissive; aloof-introverted; cold-quarrelsome; and arrogant-calculating. The order of the adjectives was randomized and subjects asked to rate how descriptive each adjective was of them.

Results

For each sample, maximum likelihood estimators of the population correlation coefficient were computed under the assumptions of circumplexity and these hypothetical "latent" variables were used to interpret the empirical data. Under the

circumplex model, the principal components structure is highly constrained and interpretable. Under this model, the adult sample data produced a fit to the circumplex model generally comparable to Wiggins' original samples (see Table 1), with the circumplex emerging on the first two components and accounting for 65% of the total variance. The plot of these two unrotated components for the empirical data is given in Figure 1. Deviations from the model were primarily associated with imperfect bipolarity. Given these deviations, an alternative simple structure model was considered. A three-component model in which affiliation and dominance marked the first two components and arrogance-ingenuousness marked the third component accounted for 85% of the total variance and represents a conceptual alternative to the circumplex for these data.

The fit of the student data to the circulant model was much weaker, with a strong general component emerging first and accounting for as much variance as the two circumplex components combined. This general component can be eliminated by ipsatizing the scores on the assumption that response bias underlies the component and their associated social desirabilities (Jackson & Helmes, 1979). Even the ipsatized data, however, showed substantial deviations from circulant structure (see Figure 2). Deviations from circumplexity in this particular sample may be associated with a reluctance to endorse the linguistically anomolous terms (e.g., unbold, unsly) which characterize several scales. A three-component simple structure model accounting for 75% of the variance of the ipsatized data was similar to the adult structure with arrogance-ingenuousness forming a third component orthogonal to both the affiliation and dominance components.

Conclusions

The results from the adult sample indicate that, with some reservations, Wiggins' circulant taxonomy of interpersonal behaviors can be extended to adult populations. The student sample results, however, indicate that response style

factors can play a very strong role with this checklist, even when a general style factor is eliminated by ipsatization. Jackson & Helmes (1979) have argued that variation due to response styles, rather than content, may account for circulant structure in these kinds of data. In this study, however, apparent response style factors in the student sample worked against the circumplex model. The current results also suggest that evaluations of circumplex models should consider simple structure models as the most likely alternative.

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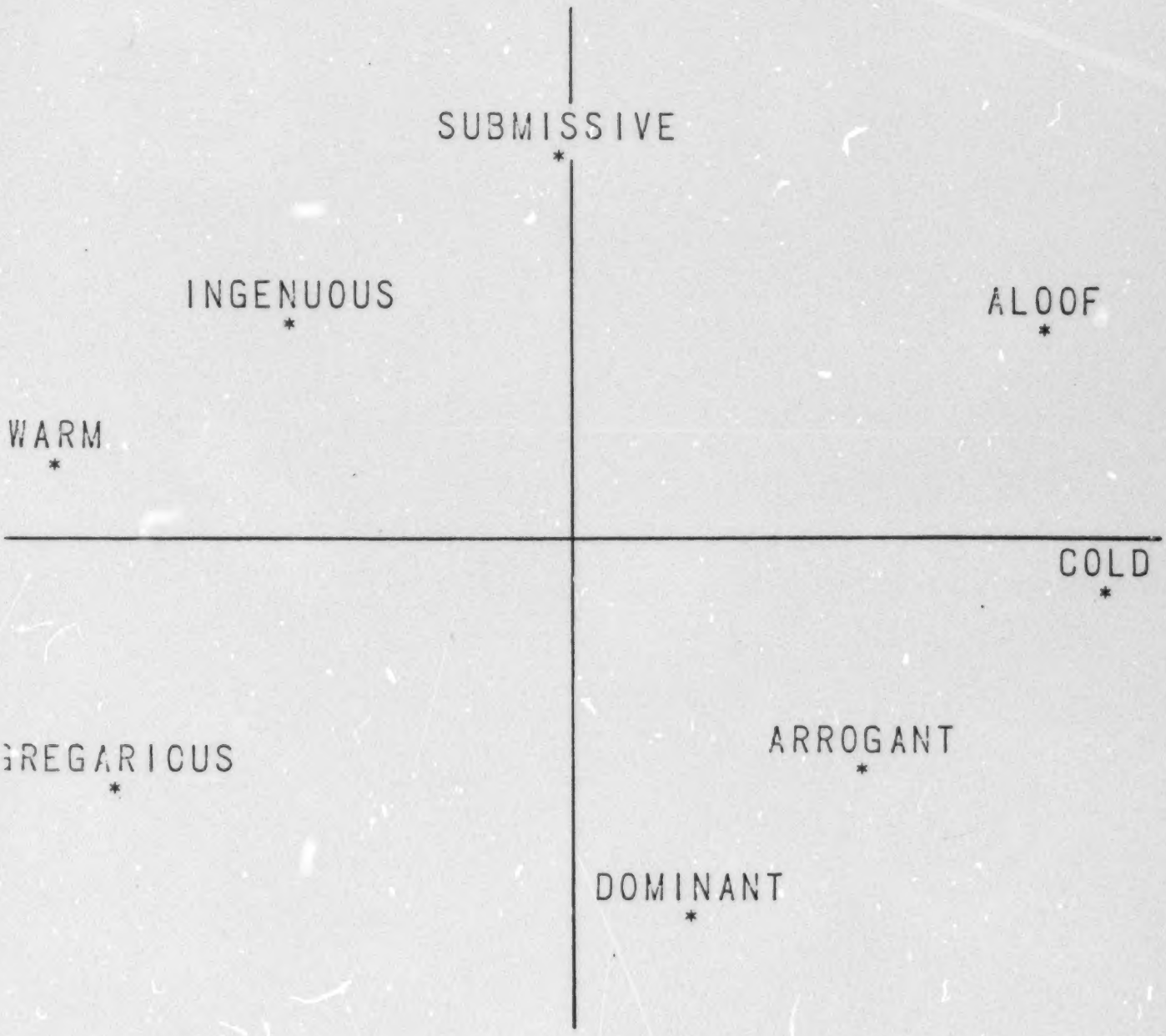

FIGURE 1

UNROTATED PRINCIPLE COMPONENT STRUCTURE

ADULT SAMPLE

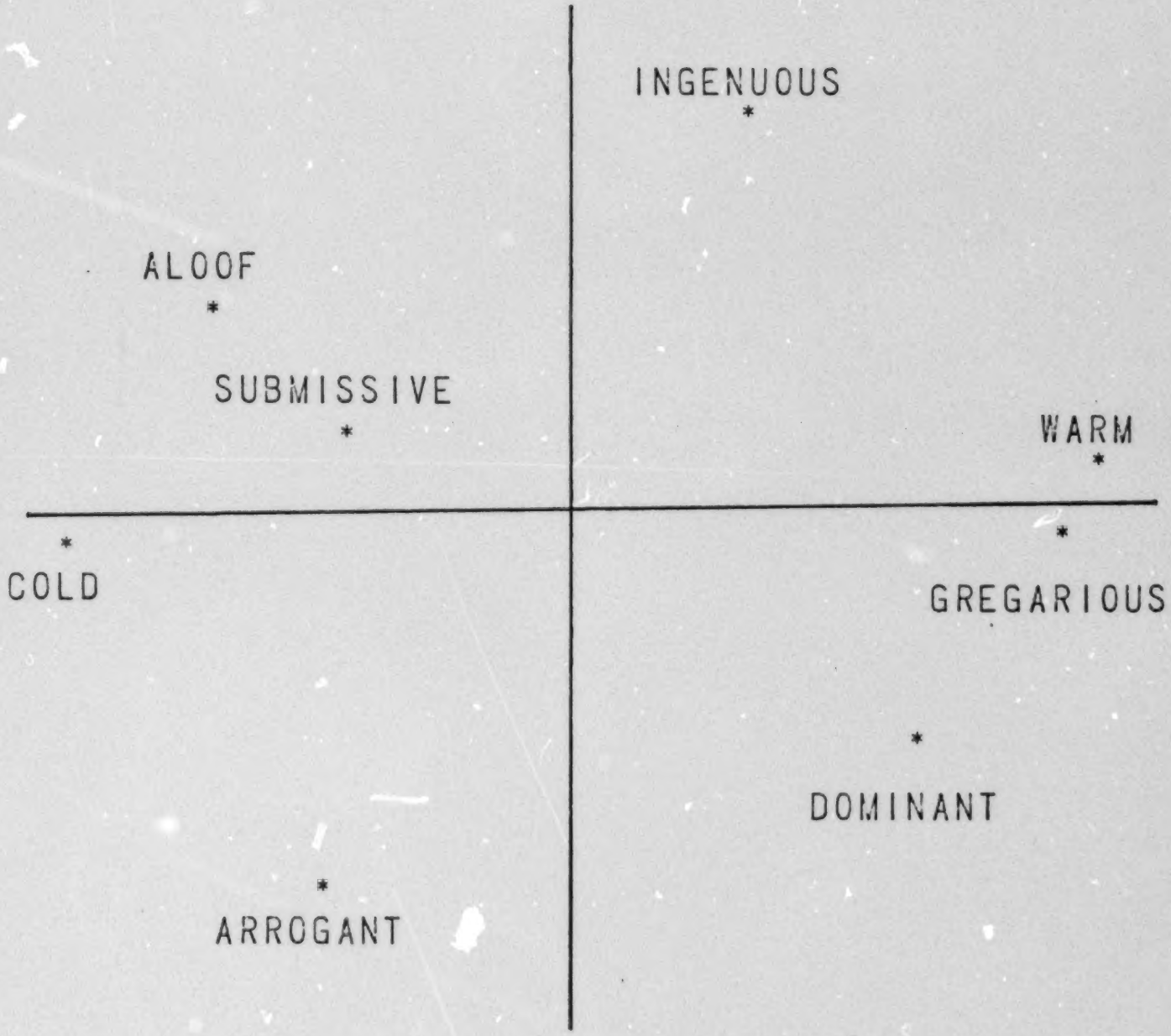

FIGURE 2

UNROTATED PRINCIPAL COMPONENT STRUCTURE

STUDENT SAMPLE

TABLE 1

PROPORTION OF VARIANCE OF PRINCIPAL COMPONENTS BASED ON MAXIMUM LIKELIHOOD ESTIMATES OF POPULATION CORRELATIONS

SAMPLE	CIRCUMPLEX	GENERAL	POLARITY	ORTHOGONALITY	SPECIFICITY
ADULTS	64.0	5.6	25.7	3.3	1.3
STUDENTS NONIPSATIZED	39.8	31.8	6.3	11.6	4.3
STUDENTS IPSATIZED	57.5	0.7	19.7	15.8	6.3
WIGGINS (1979) SAMPLE A	76.0	6.5	9.8	5.4	2.4